

Prepopulating values in ECHO forms

Introduction

ECHO 10.79 adds the ability to specify elements within ECHO forms (order and service option definitions) which will be populated dynamically with default values pulled from the user's current environment. For instance, a form could be prepopulated with a users email address, or with the spatial or temporal search parameters specified in the user's search. Prepopulation is performed using an ECHO Forms 'extension', similar to the existing 'autopopulate' extension. Like the autopopulate extension, prepopulation is not automatically added to all forms. Forms must be updated (using PUMP or the echo-rest API) to include a directive instructing Reverb to apply prepopulation when the form is rendered.

Note that this enhancement does not currently work with the Aster Order workflow (AKA legacy order workflow). NCR 11014620 will remedy this.

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Prepopulate Extension

To enable prepopulation, an extension element must be added to the model element within the form. An example extension element is shown below.

```
<extension name="pre:prepopulate" xmlns:pre="http://echo.nasa.gov/v9/echo
forms/prepopulate">
<pre:expressions>
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:email"
source="EMAIL" />
</pre:expressions>
</extension>
```

The first line instructs the forms renderer which extension to use. This line must be exactly as printed or else the extension will not be applied. Within the prepopulate extension, we define a list of one or more expressions. Each expression instructs the form renderer to populate a particular element in the form model from a specified source. In the example above we are populating the `ecs:request/ecs:requestInfo/ecs:email` element with the current user's email address (assuming the user is logged in). The source must be set to one of the valid source names (described below). If the specified source is invalid or does not correspond to a value (e.g. source=EMAIL and the user is not logged in), the element will be left alone, either blank or with any default value provided in the form.

Prepopulation Sources

The following sections list the possible values of the 'source' attribute in the pre:expression element. These values can be either upper or lower case.

Current User Information

These parameters come from the currently logged in user's information (i.e. URS). If the user is not logged in, then these values will be blank.

- **EMAIL:** Email address of the currently logged in user.
- **ADDRESS:** Physical address of the currently logged in user, in the format : <Street> <City>, <Country>
- **FIRST_NAME:** First name of the currently logged in user.
- **LAST_NAME:** Last name of the currently logged in user.

Search Parameters

When a user adds an item to the shopping cart, the current search query is saved. This contains whatever parameters the user input on the search screen. These search parameters can then be populated into the form. This allows, for instance, a user to search for granules in a particular temporal/spatial range and then have the same constraints populated into a form for subsetting to

the search area. Note that if granules from the same collection are added to the cart separately and therefore have different search queries, these differences will be overwritten if the user selects the "Use these values for all applicable items" checkbox in the form. In general this is desirable as it allows the granules to be combined into a single request or order.

- **KEYWORDS:** Search terms the user entered in the text box of the dataset search page.
- **Temporal Constraints:** Temporal search start and end time entered in the dataset search page. In the format: "YYYY-MM-DDTHH:MM:SS".
 - **TEMPORAL_START**
 - **TEMPORAL_END**
- **Spatial Constraints:** Spatial search area specified in the dataset search page. This currently only supports bounding box spatial areas.
 - **BBOX_NORTH**
 - **BBOX_WEST**
 - **BBOX_SOUTH**
 - **BBOX_EAST**

Cart Information

- **ALL_DATASET_IDS_FROM_CART:** A list of all the datasets which have granules in the cart. This is added to support forms which contain different behavior based on what collections are being acted upon (e.g. the new GLAS subsetter form).

Example

Sample XML

```
<form xmlns="http://echo.nasa.gov/v9/echoforms" xmlns:forms="http://echo.nasa.gov/v9/echoforms" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" targetNamespace="http://ecs.nasa.gov/options" xsi:schemaLocation="http://echo.nasa.gov/v9/echoforms http://api.echo.nasa.gov/echo/wsdl/EchoForms.xsd">  
<model>  
<instance>  
<ecs:request xmlns:ecs="http://ecs.nasa.gov/options">  
<ecs:requestInfo>  
<ecs:email/>  
<ecs:address/>  
<ecs:first_name/>  
<ecs:last_name/>  
<ecs:keywords/>  
<ecs:start_date/>  
<ecs:end_date/>  
<ecs:ullat>90</ecs:ullat> <!-- Default values such as these will be left intact if there is no value found at the specified source-->  
<ecs:ullon>-180</ecs:ullon>  
<ecs:lrlat>-90</ecs:lrlat>  
<ecs:lrlon>180</ecs:lrlon>  
    <ecs:spatial/>  
    <ecs:shp_file/>
```

```

<ecs:dataset_ids/>
<ecs:dataset_ids_hidden/> <!-- Example of an element with no associated
input control, i.e. hidden from the user -->
<ecs:bogus/>
</ecs:requestInfo>
</ecs:request>
</instance>
<extension name="pre:prepopulate" xmlns:pre="http://echo.nasa.gov/v9/echo
forms/prepopulate">
<pre:expressions>
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:email"
source="EMAIL" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:address"
source="ADDRESS" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:first_name"
source="FIRST_NAME" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:last_name"
source="LAST_NAME" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:keywords"
source="KEYWORDS" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:start_date"
source="TEMPORAL_START" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:end_date"
source="TEMPORAL_END" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:ullat"
source="BBOX_NORTH" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:ullon"
source="BBOX_WEST" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:lrlat"
source="BBOX_SOUTH" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:lrlon"
source="BBOX_EAST" />

        <pre:expression ref="ecs:request/ecs:requestInfo/ecs:spatial
" source="SPATIAL" />
            <pre:expression ref="ecs:request/ecs:requestInfo/ecs:shp_fil
e" source="SHP_FILE" />

<pre:expression ref="ecs:request/ecs:requestInfo/ecs:dataset_ids"
source="ALL_DATASET_IDS_FROM_CART" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:dataset_ids_hidden"
source="ALL_DATASET_IDS_FROM_CART" />
<pre:expression ref="ecs:request/ecs:requestInfo/ecs:bogus"
source="BOGUS" /> <!-- Unrecognized source is ignored -->
</pre:expressions>
</extension>
</model>
<ui>
<input label="Email Address" ref="ecs:requestInfo/ecs:email" type="xsd:st
ring"/>
<input label="Mailing Address" ref="ecs:requestInfo/ecs:address" type="xs
d:string"/>
<input label="First Name" ref="ecs:requestInfo/ecs:first_name" type="xsd:
string"/>
<input label="Last Name" ref="ecs:requestInfo/ecs:last_name" type="xsd:st
ring"/>
<input label="Search Keywords" ref="ecs:requestInfo/ecs:keywords" type="x
sd:string"/>
<input label="Start Date" ref="ecs:requestInfo/ecs:start_date" type="xsd:
dateTime"/>
<input label="End Date" ref="ecs:requestInfo/ecs:end_date" type="xsd:date
Time"/>

<input label="North" ref="ecs:requestInfo/ecs:ullat" type="xsd:string"/>
<input label="West" ref="ecs:requestInfo/ecs:ullon" type="xsd:string"/>
<input label="South" ref="ecs:requestInfo/ecs:lrlat" type="xsd:string"/>
<input label="East" ref="ecs:requestInfo/ecs:lrlon" type="xsd:string"/>

<input label="Spatial Bounds" ref="ecs:requestInfo/ecs:spatial" type="xsd
:string"/>
<input label="ESRI Shp File" ref="ecs:requestInfo/ecs:shp_file" type="xsd
:string"/>

```

```

<input label="Dataset IDs" ref="ecs:requestInfo/ecs:dataset_ids" type="xs
d:string"/>
<input label="Bogus value" ref="ecs:requestInfo/ecs:bogus" type="xsd:stri
ng"/>
</ui>
</form>

```

Rendered form in Reverb

EOSDIS Home | Reverb Home | About | Tutorial | Shopping Cart (2) | Order Status | Service Request Status | Account | Sign Out (User101)

Search Options

Spatial
Bounding Box: -67.340, 115.313, 71.301, -108.984

Search Terms
spatial type

Temporal
Start: 2008-03-01 00:00:00
End: 2009-03-31 23:59:59

Platforms & Instruments [?]

Campaigns [?]

Processing Levels [?]

Science Keywords [?]

Feedback?
Tell us what you think.

Availability [?]

FIX_PROV1 Event 1
(Start Date Not Provided) to (End Date Not Provided)
More

Notices [?]

System Event 3
(Start Date Not Provided) to 2020-12-11 2:00PM (GMT-5:00)
More

System Event 2
2011-12-11 2:00PM (GMT-5:00) to (End Date Not Provided)
More

FIX_PROV1 Event 2
(Start Date Not Provided) to (End Date Not Provided)
More

Release Information [?]

Upcoming Features

Step 1: Select Search Criteria

Spatial Search [?]
Bounding Box: -67.340, 115.313, 71.301, -108.984 | Reset | Clear | Satellite

Drag the corners to adjust their location

Search Terms [?] | Spatial type

Temporal Search [?]

START: 2008-03-01 00:00:00 | Clear

END: 2009-03-31 23:59:59 | Clear

* all times must be specified in GMT

Date Range | Annual Repeating Dates

Step 2: Select Datasets

No Datasets Found

Step 3: Discover Granules

Dataset with granules representing all spatial types V1
Archive Center: FIX_PROV1 Short Name: WmAI/SpatialTypes Version: 1

Reverb dataset search page with search parameters set prior to searching for

granules and adding to the cart.

Logged in as 'User101'

Contact Information:

Admin User
admin@example.com

[Edit Contact Information](#)

2 order items out of a total of 2

Ordering 2 items from "Dataset with granules representing all spatial types V1"

Order Options

Email Address	admin@example.com
Mailing Address	123 Main St asdf, Andorra
First Name	Admin
Last Name	User
Search Keywords	spatial type
Start Date	2008-03-01T00:00:00
End Date	2009-03-31T23:59:59
North	71.301
West	-108.984
South	-67.340
East	115.313
Dataset IDs	Dataset with granules representing all spatial types V1
Bogus value	

2 items [Expand Item List](#)

[Remove All Items From Order](#)

About Tutorial Shopping Cart (2) Order Status Service Requests

EOSDIS Service Implementation

Use these values for all applicable items

Items	Email Address	admin@example.com
Bou	Mailing Address	123 Main St asdf, Andorra
2010	First Name	Admin
	Last Name	User
	Search Keywords	spatial type
	Start Date	2008-03-01T00:00:00
	End Date	2009-03-31T23:59:59
	North	71.301
	West	-108.984
	South	-67.340
	East	115.313
	Dataset IDs	Dataset with granules representing all spatial types V1
	Bogus value	

[Save](#) [Cancel](#)

Prepopulated forms for an order (left) and a service request (right). Note all of the specified values are populated, and that the 'Bogus' value is empty as the source specified in the form was not recognized.

Not Logged in ([Sign In](#))

 [Add Contact Information \(Required\)](#)

Ordering 1 item from "Dataset with granules representing all spatial types V1"

Order Options

Email Address

Mailing Address

First Name

Last Name

Search Keywords

Start Date

End Date

North

West

South

East

Dataset IDs

Bogus value

1 item [Expand Item List](#)

[Remove All Items From Order](#)

The same form as above, but with no search parameters and no logged in user.

Note that the default spatial bounds specified in the form have been left intact

since there were no spatial search parameters specified.